

100mA, 30V Schottky Barrier Diode

FEATURES

- Low forward voltage
- Surface mount device type
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

APPLICATIONS

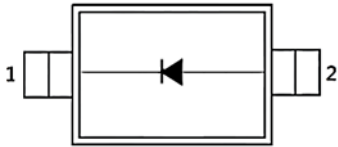
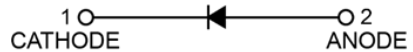
- Adapters
- For switching power supply
- Low stored charge
- Inverter

MECHANICAL DATA

- Case: SOD-123
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 11.00 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	100	mA
V_{RRM}	30	V
V_F at $I_F=100mA$	1	V
$T_{J\ MAX}$	125	°C



PACKAGE: SOD-123	PIN CONFIGURATION	CIRCUIT DIAGRAM
		

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	500	mW
Reverse voltage	V_R	30	V
Forward current	I_F	100	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive peak forward surge current @ 8.3ms single half sine wave	I_{FSM}	600	mA
Junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +125	°C

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 0.1\text{mA}, T_J = 25^\circ\text{C}$	V_F	-	0.24	V
	$I_F = 1.0\text{mA}, T_J = 25^\circ\text{C}$			0.32	
	$I_F = 10\text{mA}, T_J = 25^\circ\text{C}$			0.40	
	$I_F = 30\text{mA}, T_J = 25^\circ\text{C}$			0.50	
	$I_F = 100\text{mA}, T_J = 25^\circ\text{C}$			1.00	
Reverse voltage	$I_R = 100\mu\text{A}, T_J = 25^\circ\text{C}$	V_R	30	-	V
Reverse current ⁽²⁾	$V_R = 25\text{V}, T_J = 25^\circ\text{C}$	I_R	-	2	μA
Total capacitance	$f=1\text{MHz}, V_R=1\text{V}$	C_T	-	10	pF
Reverse recovery time	$I_F = 10\text{mA},$ $I_R = 10\text{mA to } 1\text{mA},$ $R_L = 100\Omega$	t_{rr}	-	5	ns

Notes:

1. Pulse test with $PW=0.3\text{ ms}$
2. Pulse test with $PW=30\text{ ms}$

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
BAT54GW RHG	SOD-123	3K / 7" Reel

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Typical Forward Characteristics

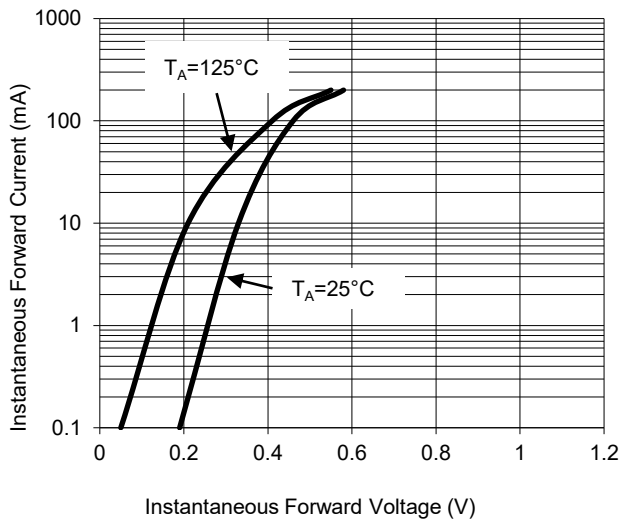


Fig.2 Typical Reverse Characteristics

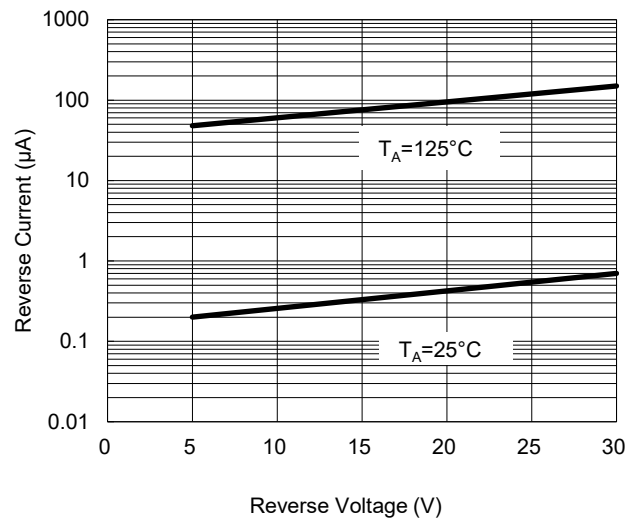


Fig.3 Typical Capacitance Characteristics

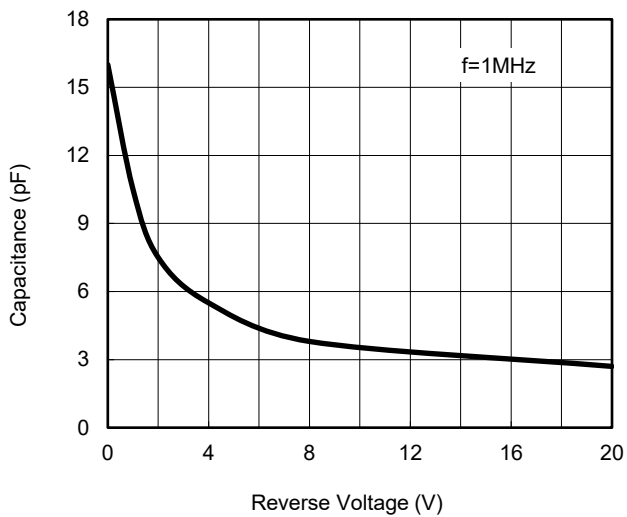
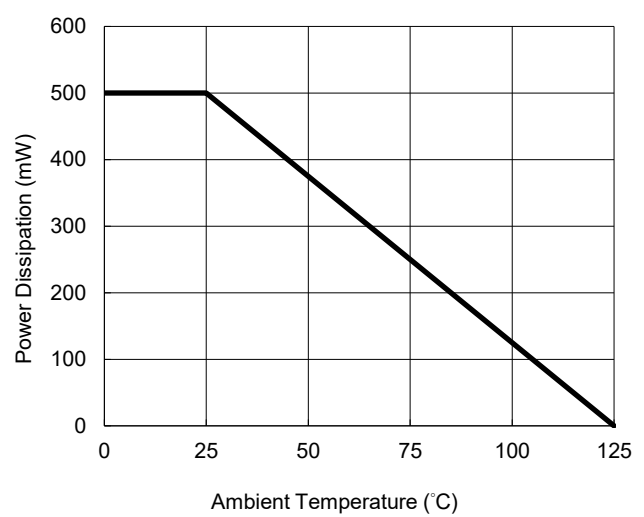
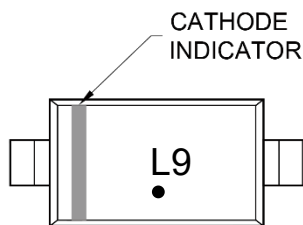
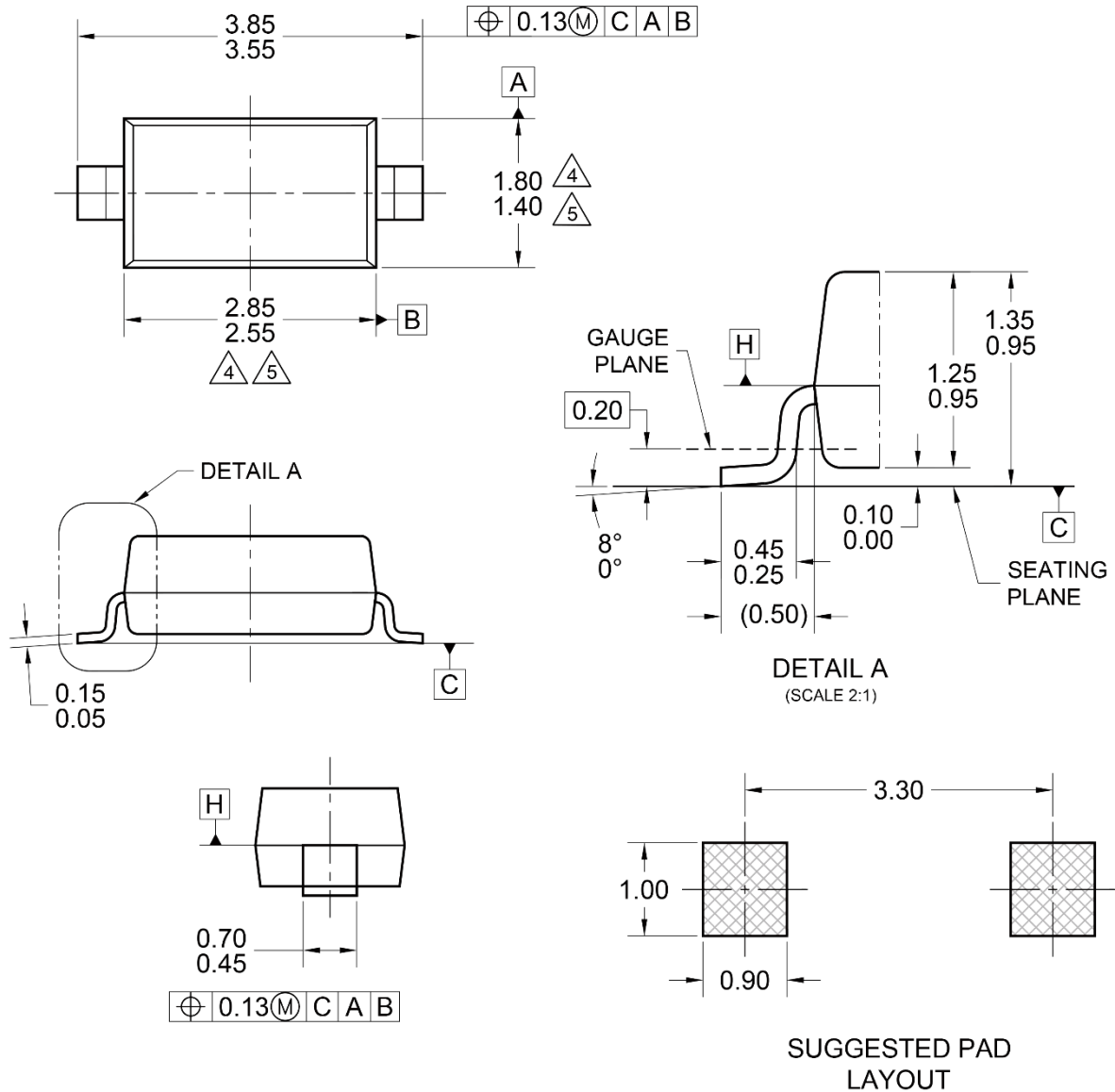


Fig.4 Power Derating Curve



PACKAGE OUTLINE DIMENSION

SOD-123



MARKING DIAGRAM

L9 = Device marking

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-215, VARIATION AD, ISSUE D.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
6. DWG NO. REF: HQ2SD07-SOD123-046 REV A.

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